

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An isolated polynucleotide, comprising a nucleic acid having a nucleotide sequence selected from the group consisting of:

(i) full-length sequences set forth in SEQ ID NO: 6, SEQ ID NO: 9, and SEQ ID NO: 12;

(ii) sequences complementary to sequences (i); and

(iii) sequences derived from or equivalent to the sequences defined in (i) or (ii) having, for every series of 100 contiguous ~~monomers~~ nucleotides, at least 70% identity with sequences (i) or (ii).

2-6. (Canceled)

7. (Currently Amended) An isolated retroviral polynucleotide comprising an env gene, wherein said env gene comprises a nucleic acid having a nucleotide sequence selected from the group consisting of the full-length sequence set forth in SEQ ID NO: 9, its complementary sequence, and sequences derived from or equivalent to SEQ ID NO: 9 or its complementary sequence having, for every series of 100 contiguous ~~monomers~~ nucleotides, at least 70% identity with SEQ ID NO: 9 or said complementary sequence.

8. (Canceled)

9. (Previously Presented) An isolated retroviral polynucleotide comprising an env gene, wherein said env gene encodes a polypeptide having, for every contiguous series of at least 30 amino acids, at least 70% identity with the peptide sequence SEQ ID NO: 10.

10-13. (Canceled)

14. (Currently Amended) An isolated fragment comprising a polynucleotide having a nucleotide sequence selected from the group consisting of:

- (i) full-length sequences set forth in SEQ ID NO: 6, SEQ ID NO: 9, and SEQ ID NO: 12;
- (ii) sequences complementary to sequences (i); and
- (iii) sequences derived from or equivalent to the sequences defined in (i) or (ii) having, for every series of 100 contiguous ~~monomers~~ nucleotides, at least 70% identity with sequences (i) or (ii).

15. (Currently Amended) The fragment according to ~~Claim 14~~ claim 14, consisting of a polynucleotide having a nucleotide sequence selected from the group consisting of:

- (i) full-length sequences set forth in SEQ ID NO: 6, SEQ ID NO: 9, and SEQ ID NO: 12;
- (ii) sequences complementary to sequences (i); and
- (iii) sequences derived from or equivalent to the sequences defined in (i) or (ii) having, for every series of 100 contiguous ~~monomers~~ nucleotides, at least 70% identity with sequences (i) or (ii).

16–25. (Canceled)

26. (Withdrawn) A method for detecting a retrovirus associated with multiple sclerosis and/or rheumatoid arthritis, in a biological sample, characterized in that an RNA and/or a DNA assumed to belong to or obtained from said retrovirus, or their complementary RNA and/or DNA, is brought into contact with a composition comprising a nucleotide fragment according to claim 14.

27. (Canceled)

28. (Currently Amended) The polynucleotide of claim 1, wherein the nucleic acid has a nucleotide sequence having, for every series of at least 100 contiguous ~~monomers~~ nucleotides, at least 80% identity with the sequences (i) or (ii).

29. (Currently Amended) The polynucleotide of claim 1, wherein the nucleic acid has a nucleotide sequence having, for every series of at least 100 contiguous ~~monomers~~ nucleotides, at least 90% identity with the sequences (i) or (ii).

30. (Currently Amended) The polynucleotide of claim 1, wherein the nucleic acid has a nucleotide sequence having, for every series of at least 100 contiguous ~~monomers~~ nucleotides, at least 95% identity with the sequences (i) or (ii).

31–35. (Canceled)

36. (Currently Amended) The retroviral polynucleotide of claim 7, wherein the nucleic acid has a nucleotide sequence having, for every series of at least 100 contiguous ~~monomers~~ nucleotides, at least 80% identity with the nucleotide sequences selected from the group consisting of SEQ ID NO: 9, and its complementary sequences.

37. (Currently Amended) The retroviral polynucleotide of claim 7, wherein the nucleic acid has a nucleotide sequence having, for every series of at least 100 contiguous ~~monomers~~ nucleotides, at least 90% identity with the nucleotide sequences selected from the group consisting of SEQ ID NO: 9, and its complementary sequences.

38. (Currently Amended) The retroviral polynucleotide of claim 7, wherein the nucleic acid has a nucleotide sequence having, for every series of at least 100 contiguous ~~monomers~~ nucleotides, at least 95% identity with the nucleotide sequences selected from the group consisting of SEQ ID NO: 9, and its complementary sequences.

39. (Canceled)

40. (Previously Presented) The isolated retroviral polynucleotide of claim 9, wherein the env gene encodes a polypeptide having, for every contiguous series of at least 30 amino acids, at least 80% identity with the peptide sequence SEQ ID NO: 10.

41. (Previously Presented) The isolated retroviral polynucleotide of claim 9, wherein the env gene encodes a polypeptide having, for every contiguous series of at least 30 amino acids, at least 90% identity with the peptide sequence SEQ ID NO: 10.

42. (Previously Presented) The isolated retroviral polynucleotide of claim 9, wherein the env gene encodes a polypeptide having, for every contiguous series of at least 30 amino acids, at least 95% identity with the peptide sequence SEQ ID NO: 10.

43-44. (Canceled)

45. (Currently Amended) The polynucleotide fragment according to claim 14, wherein said fragment has, for every series of 100 contiguous ~~monomers~~ nucleotides, at least 80% identity with the nucleic acid sequences of (i) or (ii).

46. (Currently Amended) The polynucleotide fragment according to claim 14, wherein said fragment has, for every series of 100 contiguous ~~monomers~~ nucleotides, at least 90% identity with the nucleic acid sequences of (i) or (ii).

47. (Currently Amended) The polynucleotide fragment according to claim 14, wherein said fragment has, for every series of 100 contiguous ~~monomers~~ nucleotides, at least 95% identity with the nucleic acid sequences of (i) or (ii).

48. (Canceled)

49. (Currently Amended) The polynucleotide fragment according to claim 15, wherein said fragment has, for every contiguous series of 100 contiguous ~~monomers~~ nucleotides, at least 80% identity with the nucleic acid sequences of (i) or (ii).

50. (Currently Amended) The polynucleotide fragment according to claim 15, wherein said fragment has, for every contiguous series of 100 contiguous ~~monomers~~ nucleotides, at least 90% identity with the nucleic acid sequences of (i) or (ii).

51. (Currently Amended) The polynucleotide fragment according to claim 15, wherein said fragment has, for every contiguous series of 100 contiguous ~~monomers~~ nucleotides, at least 95% identity with the nucleic acid sequences of (i) or (ii).

52-59. (Canceled)

60. (Previously Presented) The isolated polynucleotide according to claim 1, wherein said polynucleotide is DNA.

61. (Previously Presented) The isolated polynucleotide according to claim 1, wherein said polynucleotide is RNA.

62. (Previously Presented) The isolated polynucleotide according to claim 1, wherein said polynucleotide is genomic DNA.

63. (Previously Presented) A recombinant vector comprising the polynucleotide defined in claim 1.

64. (Previously Presented) An expression vector comprising the polynucleotide defined in claim 1.

65. (Previously Presented) An isolated polynucleotide, comprising at least one nucleotide sequence selected from the group consisting of SEQ ID NO: 6, a complement of SEQ ID NO: 6, SEQ ID NO: 9, a complement of SEQ ID NO: 9, SEQ ID NO: 12, and a complement of SEQ ID NO: 12.

66. (Previously Presented) The isolated polynucleotide of claim 65, wherein said nucleotide sequence is selected from the group consisting of SEQ ID NO: 6, a complement of SEQ ID NO: 6, SEQ ID NO: 9, and a complement of SEQ ID NO: 9.